**NOTE TO READER: There are only 20 tossups in this packet, as the original #21 was a repeat. If you need a tiebreaker, please consult the TD and switch to q21 of another packet. Sorry for the confusion!**

1. A freak thunderstorm spawned three extremely rare tornadoes during this event, which some interpreted as divine intervention. In his memoirs, Paul Jennings recalled scrambling to save valuables before this event. The dispersion of militiamen in the “Bladensburg races” allowed this event to occur, which was carried out by the occupying forces of George Cockburn and Robert Ross. This event was partially justified as retaliation for the burning of York, and destroyed important government buildings such as the Library of Congress and the White House. For 10 points, name this event during the War of 1812, when British soldiers set the capital of the United States on fire.

ANSWER: **burn**ing of **Washington**, D.C. [accept “**D.C.**” or “the **District of Columbia**” in place of Washington, D.C.; anti-prompt on more specific answers such as “burning of the White House”]

1. In a play by this author, a suitor dubiously asserts that his brain is larger than that of the woman he desires. In that play by this author, a group of dancing girls mock a foreign photographer by describing his camera as a “one-eyed box” after his motorcycle breaks down. In another play by this author, a jailed lieutenant strangles himself after he learns that his son Olunde took his place in a ritual suicide. In a play this author set in the village of Ilujinle, Lakunle’s refusal to pay a bride-price leads Sidi to reject him in favor of Chief Baroka. For 10 points, name this Nigerian playwright of *Death and the King’s Horseman* and *The Lion and The Jewel.*

ANSWER: Wole **Soyinka** [or Akinwándé Oluwo̩lé Babátúndé **S̩óyinká**]

1. In certain regions, the natural log of the actual vapor pressure divided by saturation vapor pressure is directly proportional to “two times the molar volume times this quantity” in the Kelvin equation. Young’s equation can be used to calculate this quantity by measuring the contact angle. The value of this quantity is equal to the derivative of Gibbs free energy with respect to area. Sodium dodecyl sulfate belongs to a class of substances that lowers this quantity, known as detergents. For 10 points, name this cohesive quantity describes how liquid droplets hold together at an air interface.  
   ANSWER: **surface tension** [accept **surface energy** or **interfacial tension**]
2. This thinker criticized stoicism and skepticism for being indifferent to or negating the other, ultimately leading to alienation in the unhappy consciousness. In another work, he argued that “being” and “nothing” are indistinguishable except in the context of “becoming,” a relation he described as *Aufhebung*, or sublation. This author of *Science of Logic* described a situation in which one party becomes dependent on the other despite having triumphed in an earlier “struggle to the death.” He often presented his arguments through a dialectic. For 10 points, name this German philosopher who described the master–slave dialectic in *The Phenomenology of Spirit*.

ANSWER: Georg Wilhelm Friedrich **Hegel**

1. The Treaty of Teschen was signed after this ruler threatened to intervene in the War of the Bavarian Succession. This ruler issued an Enlightenment-inspired law code called the *Nakaz.* Along with Joseph II and Frederick the Great, this ruler participated in the First Partition of Poland. A large dome-shaped diamond was gifted to this ruler by Grigory Orlov, who orchestrated the coup that put this ruler on the throne. This ruler faced the revolt of Yemelyan Pugachev, who claimed to be her dead husband Peter III. The Crimean Khanate was annexed during the reign of this ruler, who toured fake villages set up in the Crimea by her lover Grigory Potemkin. For 10 points, name this Russian empress.

ANSWER: **Catherine** the **Great** [or **Catherine II**; accept **Yekaterina Alekseyevna**; accept **Yekaterina Velikaya**; accept **Sophie** Friederike **Auguste**, Princess von Anhalt-Zerbst; prompt on Catherine; prompt on Yekaterina]

1. These figures tricked their half-brothers into a tree that then grew too tall for them to get down from, turning them into monkeys. Unlike their predecessors, this group avoided using a torch and cigarettes given to them in the Dark House. After one of these characters was decapitated in the Bat House, his head was used as a ball. These characters injured Seven Macaw with their blowguns while he was eating. This pair became the sun and the moon after defeating the lords of Xibalba, who challenged them to a ballgame. For 10 points, give this common name for Hunahpu and Xbalanque (“shbah-lan-KAY”), a pair from Mayan mythology featured in the *Popol Vuh*.

ANSWER: Mayan **Hero Twins** [or **Hunahpu** and **Xbalanque** in either order before mentioned]

1. A form of this element exists predominantly in a triplet state with two unpaired electrons in its pi star orbital. A dismutase is used to protect the body from radicals of this element. Carbon-carbon double bonds can be cleaved into two carbonyls by a triatomic form of this element. A highly reactive anion that contains two atoms of this element with a charge of “minus 1” is called “super-[*this element*]”. A molecule of this element is the final electron acceptor in the electron transport chain. It reacts with a hydrocarbon to produce water vapor and carbon dioxide in combustion reactions. For 10 points, name this element with symbol O.

ANSWER: **oxygen** [accept **O**]

1. This writer insisted that humanity should strive “to trample beneath us those appetites which spring from earthly impulses” in a letter he wrote after going on a hike with his brother near the town of Malaucene. This writer’s collections of letters include *Seniles* and *Epistolae familiares,* the latter of which includes his “Ascent of Mount Ventoux.” The first poem in a collection by this writer opens by addressing “You who hear the sound, in scattered rhymes,” and was written for a woman he met in 1327. For 10 points, name this early Italian poet, whose *Il Canzoniere* includes many poems addressed to his love Laura written in his namesake sonnet form.

ANSWER: **Petrarch** [or Francesco **Petrarca**; accept **Petrarchan** sonnet]

1. This artist was known as his country’s ‘Raphael’ after his treatment of *Archangel Michael Binding the Devil.* Charles Rollins’s *American History* inspired this artist to engrave his version of the *Death of Socrates*. This artist was the second president of the Royal Academy and depicted a figure seated in a thunderstorm receiving a shock on the finger from a key in one work. A squatting Native American rests his hand under his chin while the title figure dies of war wounds in this artist’s most famous work. For 10 points, identify this American artist known for his history paintings such as *The Death of General Wolfe.*

ANSWER: Benjamin **West**

1. The pendrin ion channel is found in this organ. A selenocysteine-containing peroxidase helps regulate the secretion of a hormone from this gland. That tyrosine-based hormone from this gland is produced from MIT and DIT precursors. Cretinism is a result of its underactivity. Another secretion of this gland, which opposes the actions of PTH in maintaining calcium homeostasis, is calcitonin. Autoimmune diseases of this gland are named after Graves and Hashimoto. It consists primarily of a colloid surrounded by follicular cells. Goiters in this gland are the result of an iodine deficiency. For 10 points, name this butterfly-shaped endocrine gland in the neck.

ANSWER: **thyroid**

1. This leader split the world’s countries into superpowers, the superpowers’ allies, and the exploited in his “Three Worlds” theory. This leader declared his support for gender equality by stating “Women hold up half the sky.” Albania’s Enver Hoxha was the only leader to support this man during his 1960 split with the Soviet Union under Nikita Khrushchev. This leader sent tens of millions of city-dwelling youth into the countryside to receive a rural “reeducation,” part of a larger campaign that denounced the “Four Olds.” Richard Nixon’s 1972 visit to this leader’s country was mostly organized by his premier Zhou Enlai. For 10 points, name this founder of communist China.

ANSWER: **Mao** Zedong [or **Mao** Tse-Tung; or Chairman **Mao**; or **Mao** Zhuxi]

1. A piano sonata in this key begins with the right hand arpeggiating a tonic triad over an Alberti bass in the left hand. A minimalist piece in this key calls for an indefinite number of performers to play arbitrary repetitions of fifty-three different phrases. If a trumpet or a clarinet plays a scale notated in this key, it will actually play a scale in B-flat major. Terry Riley wrote a piece titled *In* this key. All string instruments are notated in this key, which is relative to A minor. This key was used to write the opening prelude and fugue of J.S. Bach’s *The Well-Tempered Clavier*, as well as Mozart’s so-called “simple sonata.” For 10 points, name this major key which contains no sharps or flats.

ANSWER: **C major** [or **C**; do not accept “C minor”]

1. Mud from this river is used to make massive pottery in Kyaukmyaung, a city along this river. A controversial dam under construction at the source of this river would most likely export most of its power to its country’s northern neighbor and is called the Myitsone Dam. The entire Pali Canon is inscribed on 729 stone tablets at the Kuthodaw Pagoda in a city along this river. Teak wood is shipped along this river’s largest tributary, the Chindwin River. This river’s delta was the hardest hit region during Cyclone Nargis in 2008. The Yangon River flows into this river, which flows past Mandalay. For 10 points, name this Southeast Asian river that flows through Myanmar.

ANSWER: **Irrawaddy** River [or **Ayeyarwady** River]

1. While considering a certain action, this character proclaims: “My thought… shakes so my single state of man that function is smothered in surmise, and nothing is but what is not.” This character’s wife urges “spirits that tend to mortal thoughts” to “unsex me here” after describing a hoarse raven that croaks another character’s “fatal entrance.” This character compares life to a “poor player that struts and frets his hour upon a stage and then is heard no more,” and describes it as “but a walking shadow.” This character is told “what’s done, is done” as he copes with having murdered King Duncan. For 10 points, name this title character of Shakespeare’s “Scottish Play.”

ANSWER: **Macbeth**

1. Louis Agassiz developed the most famous theory of these phenomena by stealing the work of Karl Schimper. Eccentricity, axial tilt, and precession are a set of three parameters that describe a model developed to describe occurrences of these events, developed by Milutin Milankovitch. The cyclic nature of these phenomena has been tied to variations in albedo. Pluvial lakes formed after the most recent of these phenomena, while the Great Oxygenation Event triggered the Huronian one of these events. A “Little” one of these periods occurred after a Medieval Warm Period. For ten points, name these glacial episodes of cooling that covered much of the Earth in sheets of ice.

ANSWER: **ice ages** [accept equivalents like **galaciation**]

1. A local leader of these people exhorted his community to “Give me your children!” when urging the surrender of twenty thousand children in an attempt at appeasement. Refugees of these people aboard the *MS St. Louis* were turned away by port authorities in three different countries. One proposal suggested deporting these people *en masse* to Madagascar. Businesses and residences belonging to these people were vandalized in the “Night of the Broken Glass” after Herschel Grynszpan assassinated Ernst vom Rath. The Wannsee Conference formulated a plan to solve the namesake “Question” of these people called the Final Solution. For 10 points, name these people who were targeted during the Holocaust.

ANSWER: **Jew**s [or **Jew**ish people; accept Ashkenazi **Jew**s; prompt on Germans, Poles, or any other nationality that was affected by the Holocaust; anti-prompt on Ashkenazi Jews; do not accept or prompt on Sephardic Jews]

1. Practitioners of this religion sometimes drink hot pepper-soaked rum to indicate the presence of the death and fertility spirits, the Guédé. Spirits in this religion are divided into “nations,” including the *Rada* and the *Petro*. Practitioners are called *chwal* or horses when they are “mounted” by this religion’s spirits. In order to communicate with those spirits in this religion, excluding ancestors, Papa Legba is usually invoked to mediate in ceremonies led by mambos or houngans. According to this religion, the creator god Bondye is unreachable, so practitioners must rely on loas to act as intermediaries. For 10 points, name this syncretic religion from Haiti.

ANSWER: **Vodou** [or **Vodoun**]

1. The protagonist of a novel by this author receives permission to take canoe rides with the beautiful Fayaway. In that novel by this author, the protagonist and his friend Toby desert the *Dolly* and surrender to a tribe of cannibals led by Mehevi. A character created by this author listens to a sermon that asks: “What is man that he should live out the lifetime of his God?”, delivered by Father Mapple. This author wrote “A Peep at Polynesian Life” titled *Typee*, and a novel that ends with its protagonist clinging on to Queequeg’s coffin after the sinking of the *Pequod.* For 10 points, name this author who wrote about Ahab’s relentless pursuit of “The Whale” in *Moby-Dick.*

ANSWER: Herman **Melville**

1. This artist used the model Adele Abruzzesi for one work depicting two lovers. That work by this artist is called *Eternal Springtime* and is housed in this artist’s namesake museum in Philadelphia. This man created a larger than life St. John in response to criticism that he had cast from a live model. The writings of Jean Froissart inspired one of this artist’s works which depicts six men with nooses around their necks. This man’s most famous work is included in the tympanum of a sculptural piece based on the *Inferno*. For 10 points, identify this sculptor of *The Burghers of Calais* whose sculptural piece *The Gates of Hell* includes *The Thinker.*

ANSWER: Auguste **Rodin** [or François Auguste René **Rodin**]

1. A character with this profession named Wallas murders Daniel Dupont at the conclusion of Alain Robbe-Grillet’s novel *The Erasers.* In a novel titled for members of this profession, Arturo and Ulysses seek out Tinajero, the first poet who self-described as a “visceral realist.” Roberto Bolaño wrote about *Savage* members of this profession. Another member of this profession appears to know nothing of “literature, philosophy and politics” according to his assistant, who helps him recover letters for “The Woman,” Irene Adler, in the story “A Scandal in Bohemia.” For 10 points, identify this profession of Arthur Conan Doyle’s Sherlock Holmes.

ANSWER: **detective**s [accept synonyms like **sleuth**s or **investigator**s]

**Bonuses**

1. This thermodynamic cycle begins with air being drawn into a compressor where it is pressurized and run through a combustion chamber. The expansion of the heated air is then used to drive a turbine. For 10 points each:

[10] Name this four-step thermodynamic cycle that describes the operation of jet engines.

ANSWER: **Brayton** cycle

[10] The compression and expansion steps of the Brayton cycle are this type of process, in which no heat is exchanged with the environment.

ANSWER: **adiabatic**

[10] The ratio of the constant-pressure form of this quantity to its constant-volume form is called the adiabatic index. This quantity is equal to the amount of heat required to increase an object’s temperature by 1 degree Kelvin.

ANSWER: **heat capacity** [accept **specific heat** capacity]

1. This E-flat minor piece includes a distinctive dual chord piano vamp that is present throughout the entire track. For 10 points each:

[10] Identify this track from the album *Time Out*. Named after its distinctive time signature, this Paul Desmond-composed piece was given lyrics in a 1961 recording with Carmen McRae.

ANSWER: “**Take Five**”

[10] This man’s namesake Quartet released the album *Time Out* that included “Take Five.” This pianist also composed “Blue Rondo A La Turk.”

ANSWER: Dave **Brubeck** [or David Warren **Brubeck**]

[10] “Take Five” was originally intended to be a solo for Joe Morello, a member of the Brubeck Quartet who played this instrument. Along with guitar, piano, and bass, this instrument is a component of swing band rhythm sections.

ANSWER: **drum**s

1. After this ruler won a battle fought on the slopes of Mount Chimborazo, an opposing general named Atoc was killed and his body gruesomely mutilated. For 10 points each:

[10] Name this victor of a civil war against his brother Huascar, who later was captured by Spanish forces at the Battle of Cajamarca.

ANSWER: **Atahualpa**

[10] Atahualpa was the last emperor of this Andean empire, which was conquered by Spaniards led by Francisco Pizarro.

ANSWER: **Inca**n Empire [or ***Tawantinsuyu***]

[10] Pizarro offered to set Atahualpa free for a ransom of one of these non-standard units of gold and two of silver. After Atahualpa paid the ransom, the Spaniards, their insatiable greed somewhat satisfied, killed him anyway.

ANSWER: **room**ful of gold [or **room**ful of silver; accept Ransom **Room**]

1. According to a note by the author, a person with this profession works in a “Plexiglas sphere set into the belly of a B-17 or B-24.” For 10 points each:

[10] Name this profession of a character who wakes up to “black flak and the nightmare fighters.” In that poem, a person with this profession is “hunched” until his “wet fur froze,” and is “washed out… with a hose” after dying.

ANSWER: the **ball turret gunner** [accept “The Death of the **Ball Turret Gunner**”; prompt on just “gunner”] [by Randall Jarrell]

[10] This other author wrote about Jenny Fields’ son with a ball turret gunner in the novel *The World According to Garp.* Doctor Wilbur Larch moonlights as an abortionist in this author’s *The Cider House Rules.*

ANSWER: John **Irving**

[10] The tail gunner Sammy Singer appears in this author’s novel *Closing Time.* Singer also briefly appears in this author’s novel about the bombardier John Yossarian, *Catch-22.*   
ANSWER: Joseph **Heller**

1. This prayer is among the texts written on the scrolls in the *tefillin*, in accordance with the commandment to “bind [these words] on your arm.” For 10 points each:

[10] Name this Jewish prayer that proclaims, “The LORD is our God, the LORD is one.” It should be recited first thing in the morning and right before going to bed, and is also traditionally recited as one’s last words.

ANSWER: **Shema** Yisrael [prompt on Hear, O Israel]

[10] The Shema is also written on *mezuzot*, which are pieces of parchment placed in these locations in a Jewish home.

ANSWER: **door**ways

[10] The Shema can be found in this fifth and last book of the Torah, which contains Moses’ words to the Jewish people before his death and the conquest of the Holy Land.

ANSWER: **Deuteronomy** [or ***Devarim***]

1. Chariot racing used to be super popular. For 10 points each:

[10] *Bigae* chariots were pulled by two of these animals, while the *quadriga* was pulled by four of them. Cavalry are troops mounted on these hooved animals.

ANSWER: **horse**s [accept ***equus***]

[10] In the Byzantine Empire, these two chariot-racing factions often fought each other in massive brawls that soccer hooligans would be proud of, but united to turn against Justinian in the Nika riots. Name both.

ANSWER: **Blue**s and **Green**s

[10] Back in Rome, chariot races would often take place in this largest Roman stadium, which centered around an elongated dirt track.

ANSWER: **Circus Maximus**

1. One section of this poem lists a number of conditions under which its subject should “be near me,” including “when my light is low” and “when my faith is dry.” For 10 points each:

[10] Identify this lengthy elegy written upon the death of Arthur Henry Hallam. This poem’s eighty-fifth canto contains the famous lines: “’Tis better to have loved and lost than never to have loved at all.”

ANSWER: “**In Memoriam** A. H. H.”

[10] This Victorian poet of “In Memoriam A. H. H.” wrote about a band of six hundred cavalrymen leading a disastrous assault “half a league onward” in “The Charge of the Light Brigade.”

ANSWER: Alfred, Lord **Tennyson**

[10] “The Charge of the Light Brigade” uses this three-word phrase to describe the location into which rode “the six hundred.”   
ANSWER: the **valley of Death**

1. Electrons undergoing this process are used to generate 3D structures of biomolecules in X-Ray crystallography. For 10 points each:  
   [10] Name this process in which a wave bends around a corner or aperture. Thomas Young conducted an experiment to study its single-slit form.

ANSWER: **diffraction**

[10] This law states that two times the distance between a diffraction aperture and the film, times sine of angle between a diffraction peak and the aperture, is proportional to the wavelength of a diffracted beam.

ANSWER: **Bragg**’s law

[10] This principle states that the diffraction pattern of a solid shape is the same as that of an hole of the same shape.

ANSWER: **Babinet**’s principle

1. This composer gave a coin to Hans Richter for conducting the premiere of his Symphony No. 4. For 10 points each:

[10] Name this composer, whose Zeroth Symphony is also called the *Study* Symphony. Many different versions of his symphonies exist, including many which may be fake, which is known as his namesake “problem.”

ANSWER Anton **Bruckner**

[10] Bruckner became a massive partisan of this composer after seeing the premiere of his opera *Tristan und Isolde*. This composer also wrote the *Ring* Cycle.

ANSWER: Richard **Wagner** [or Wilhelm Richard **Wagner**]

[10] Bruckner’s *Romantic* Symphony contains a movement of this name depicting a hunt. This name generally refers to a light-hearted movement, since it means “joke” in Italian.

ANSWER: **scherzo**

1. Olson’s law of large groups states that the larger the group, the larger this problem becomes. For 10 points each:

[10] Name this problem that leads to inefficiency in markets. When this problem occurs, people receive goods or services that they do not pay for.

ANSWER: **free rider** problem

[10] The free rider problem is most common among this type of good. This type of good is non-excludable and non-rivalrous, and examples of it include fresh air and street lighting.

ANSWER: **public** goods

[10] The free rider problem can be exacerbated by the presence of the “positive” form of these constructs. Ronald Coase theorized that bargaining will lead to an efficient outcome if one can trade “in” these constructs with no cost.

ANSWER: **externalitie**s

1. This man’s jealousy of his nephew Perdix’s inventions caused him to push Perdix off the Acropolis. For 10 points each:

[10] Name this inventor who created wings with wax and feathers to escape with his son from imprisonment. Despite this man’s warnings, his son flew too close to the sun, causing those wings to fall apart.

ANSWER: **Daedalus**

[10] Daedalus was imprisoned by this king of Crete after designing the labyrinth to hold the Minotaur. This man demanded fourteen youths be sent from Athens periodically as sacrifice to the Minotaur.

ANSWER: **Minos**

[10] After Minos found Daedalus hiding under the protection of King Cocalus on Sicily, Minos was killed either by Cocalus’ daughters or by Daedalus himself with boiling water while he was performing this action.

ANSWER: taking a **bath** [or obvious equivalents]

1. One artist on this track reminisces about watching “orange cassette tapes / with Timmy, Tommy and Chuckie,” and bemoans having to wear visine so his grandma will hug him. For 10 points each:

[10] Name this song from the mixtape *Acid Rap* whose chorus repeats “cigarettes on cigarettes, my mama think I stink.”

ANSWER: “**Cocoa Butter Kisses**”

[10] “Cocoa Butter Kisses” is a song by this Chicago-based artist who recently released his third mixtape *Coloring Book*.

ANSWER: **Chance** the Rapper [accept Lil **Chano** from 79th or Chancellor **Bennett**]

[10] This female rapper, who appears with Chance on the song “Lost” recently released her first mixtape *Telefone*, which features songs like “Shadow Man” and “Diddy Bop.”

ANSWER: **Noname** Gypsy

1. The first published work of a playwright born in this country was titled *The Harrowing of Benjy.* For 10 points each:

[10] Name this Caribbean country. A poet who was born in this country wrote “Ruins of a Great House,” “A Far Cry from Africa,” and *Omeros.*

ANSWER: **Saint Lucia**

[10] That Saint Lucian author of *Omeros* was this Nobel Laureate.

ANSWER: Derek **Walcott**

[10] Walcott’s *Omeros* is a retelling of a work by this earlier poet. George Chapman translated into English this poet’s *Iliad* and *Odyssey.*

ANSWER: **Homer**

1. The failed Operation Eagle Claw during this event resulted in the resignation of Secretary of State Cyrus Vance. For 10 points each:

[10] Name this 444-day event that followed the 1979 storming of the American embassy in its namesake country. This event ended on the day of Ronald Reagan’s inauguration.

ANSWER: **Iran Hostage** Crisis

[10] The Iran Hostage Crisis contributed to Ronald Reagan’s victory over this man in the 1980 presidential election. This president’s achievements include brokering the Camp David Accords.

ANSWER: Jimmy **Carter** [or James Earl **Carter**, Jr.]

[10] This ABC News television program evolved out of nightly coverage of the Iran Hostage Crisis called *America Held Hostage*. This late-night program was anchored for 25 years by Ted Koppel.

ANSWER: ***Nightline***

1. Most cellular ATP is found complexed with a cation of this element. For 10 points each:

[10] Name element whose sulfate is known as Epsom salt. This element is added to alkyl halides to create Grignard reagents.

ANSWER: **Magnesium** [accept **Mg**2+]

[10] Magnesium is found at the center of the porphyrin ring of this light-harvesting pigment found in the thylakoids of chloroplasts.

ANSWER: **chlorophyll**

[10] Unlike Grignard reagents, these organometallic reagents are used for more sensitive applications like conjugate additions. Two alkyl chains are bonded to one copper atom with a lithium counterion in these reagents.

ANSWER: **Gilman** reagents [accept **organocuprates**]

1. This character’s “Smile” titles the final section of the novel in which she appears. For 10 points each:

[10] Identify this character, whose masculine name is inspired by her owner’s interest in Russian literature. Near the novel’s end, Tereza discovers that this character’s pronounced limp is due to cancer.

ANSWER: **Karenin**

[10] The dog Karenin is adopted by Tomas and Tereza in this novel, partly set during the Prague Spring.

ANSWER: *The* ***Unbearable Lightness of Being*** [or ***Nesnesitelná lehkost bytí***]

[10] A large number of witticisms appear in this author’s novel about Ludvik Jahn, titled *The Joke.* This author also wrote *The Book of Laughter and Forgetting* and *The Unbearable Lightness of Being.*

ANSWER: Milan **Kunder**

1. The only thoroughly documented work by Hugo van der Goes is a triptych of this kind. For 10 points each:

[10] Name this kind of work. An example of this type of work shows the crucifixion in the middle panel, St. Sebastian being pierced by arrows on the left, and St. Anthony being threatened by a monster on the right

ANSWER: **altarpieces**

[10] The Isenheim Altarpiece is a masterpiece of this German artist. This artist was the subject of the Paul Hindemith opera *Mathis der Maler.*

ANSWER: Matthias **Grunewald**

[10] This man painted the Ghent Altarpiece with his brother Hubert. This Netherlandish painter depicted a dog at the foot of a couple in his *Arnolfini Portrait*.

ANSWER: Jan **van Eyck**

1. The Western Rebellion and Kett’s Rebellion occurred during this man’s reign. For 10 points each:

[10] Name this only son of a Tudor monarch, born to Jane Seymour. His early death at the age of fifteen led to the brief nine-day reign of Lady Jane Grey.

ANSWER: **Edward VI** [prompt on Edward]

[10] Edward VI was the only son of this king with six wives. This king’s inability to annul his marriage from Catherine of Aragon prompted him to establish the Anglican Church.

ANSWER: **Henry VIII** [prompt on Henry]

[10] Henry VIII’s advisors included a man with this surname, who was executed after he provided Henry VIII with the notoriously ugly Anne of Cleves. Two later men with this surname ruled over the Protectorate.

ANSWER: **Cromwell** [accept Thomas **Cromwell**; accept Oliver **Cromwell**; accept Richard **Cromwell**]

1. Fluorescence recovery after photobleaching, or FRAP, can be used to observe the lateral diffusion of molecules in this structure, validating the fluid mosaic model of its behavior. For 10 points each:

[10] Name this cellular structure comprised of a phospholipid bilayer that surrounds the cytoplasm.  
ANSWER: plasma **membrane** [or cell **membrane**]

[10] These membrane channels allow the selective osmosis of water in and out of the cell. The hormone ADH causes an increase in their expression in the collecting ducts, allowing increased water reabsorption.

ANSWER: **aquaporin**s

[10] Movement between the faces of the plasma membrane is catalyzed bidirectionally by a scramblase or unidirectionally by these two enzymes. Name either.

ANSWER: **flippase** or **floppase**

1. This thinker described how observing a certain individual’s “thoughtlessness” inspired her last, unfinished work, *The Life of the Mind*. For 10 points each:

[10] Name this thinker that described the banality of evil in a work about the trial of Adolf Eichmann in Jerusalem.

ANSWER: Hannah **Arendt** [or Johanna **Arendt**]

[10] In *The Human Condition*, Arendt analyzed this type of life through labor, work, and action, arguing that despite its potential to express freedom, its unpredictability led philosophers to prefer its counterpart instead.

ANSWER: *vita* ***activa*** [or **active** life; or word forms]

[10] In her first work, Arendt described *The Origins of* this form of government, exemplified by Nazism and Stalinism. Arendt argued that it was distinguished by its subjugation of the entire population through terror.

ANSWER: **totalitarianism** [accept *The* ***Origins of Totalitarianism***]

A rooster appears in the top left of this sculpture, below which a man blows a horn, a man holds a jug, and another man with a knotted rope over his shoulder carries a sword. For 10 points each:

[10] Name this sculpture that depicts Liberty over a group of volunteers from the insurrection of August 10, 1792. It was sculpted by Francois Rude and is one of four main sculptural groups on a monument along with *Le Triomphe*, *La Resistance*, and *La Paix*.

ANSWER: ***Le Depart*** *de 1792* [accept *La* ***Marseillaise***]

[10] *La Marseillaise* appears on this monument that sits at the western end of the Champs-Élysées. It celebrates France’s victories in the French Revolution and the Napoleonic Wars.

ANSWER: *L’****Arc de Triomphe*** *de l’Etoile*

[10] One of these things is located by the Unknown Soldier buried below the Arc de Triomphe and was first established by Maginot. Another one of these things is at JFK’s grave in Arlington National Cemetery.

ANSWER: eternal **flame** [prompt on answers like torch or other equivalents]